

## SEQUENCE LISTING

&lt;110&gt; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)

&lt;120&gt; GLUT-1 AS A RECEPTOR FOR HTLV ENVELOPES AND ITS USES

&lt;130&gt; IOB 03 BG CNR GLUT1

&lt;160&gt; 31

&lt;170&gt; PatentIn version 3.1

&lt;210&gt; 1

&lt;211&gt; 1479

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(1479)

&lt;223&gt;

&lt;400&gt; 1

atg	gag	ccc	agc	agc	aag	aag	ctg	acg	ggt	cgc	ctc	atg	ctg	gct	gtg	48
Met	Glu	Pro	Ser	Ser	Lys	Lys	Leu	Thr	Gly	Arg	Leu	Met	Leu	Ala	Val	
1				5					10					15		

gga	gga	gca	gtg	ctt	ggc	tcc	ctg	cag	ttt	ggc	tac	aac	act	gga	gtc	96
Gly	Gly	Ala	Val	Leu	Gly	Ser	Leu	Gln	Phe	Gly	Tyr	Asn	Thr	Gly	Val	
			20					25					30			

atc	aat	gcc	ccc	cag	aag	gtg	atc	gag	gag	ttc	tac	aac	cag	aca	tgg	144
Ile	Asn	Ala	Pro	Gln	Lys	Val	Ile	Glu	Glu	Phe	Tyr	Asn	Gln	Thr	Trp	
		35					40					45				

gtc	cac	cgc	tat	ggg	gag	agc	atc	ctg	ccc	acc	acg	ctc	acc	acg	ctc	192
Val	His	Arg	Tyr	Gly	Glu	Ser	Ile	Leu	Pro	Thr	Thr	Leu	Thr	Thr	Leu	
	50					55					60					

tgg	tcc	ctc	tca	gtg	gcc	atc	ttt	tct	gtt	ggg	ggc	atg	att	ggc	tcc	240
Trp	Ser	Leu	Ser	Val	Ala	Ile	Phe	Ser	Val	Gly	Gly	Met	Ile	Gly	Ser	
65					70					75					80	

ttc	tct	gtg	ggc	ctt	ttc	gtt	aac	cgc	ttt	ggc	cgg	cgg	aat	tca	atg	288
Phe	Ser	Val	Gly	Leu	Phe	Val	Asn	Arg	Phe	Gly	Arg	Arg	Asn	Ser	Met	
				85					90					95		

ctg	atg	atg	aac	ctg	ctg	gcc	ttc	gtg	tcc	gcc	gtg	ctc	atg	ggc	ttc	336
Leu	Met	Met	Asn	Leu	Leu	Ala	Phe	Val	Ser	Ala	Val	Leu	Met	Gly	Phe	
			100					105					110			

tcg	aaa	ctg	ggc	aag	tcc	ttt	gag	atg	ctg	atc	ctg	ggc	cgc	ttc	atc	384
Ser	Lys	Leu	Gly	Lys	Ser	Phe	Glu	Met	Leu	Ile	Leu	Gly	Arg	Phe	Ile	
		115					120					125				

atc	ggt	gtg	tac	tgc	ggc	ctg	acc	aca	ggc	ttc	gtg	ccc	atg	tat	gtg	432
Ile	Gly	Val	Tyr	Cys	Gly	Leu	Thr	Thr	Gly	Phe	Val	Pro	Met	Tyr	Val	
		130					135				140					

ggt gaa gtg tca ccc aca gcc ttt cgt ggg gcc ctg ggc acc ctg cac Gly Glu Val Ser Pro Thr Ala Phe Arg Gly Ala Leu Gly Thr Leu His 145 150 155 160	480
cag ctg ggc atc gtc gtc ggc atc ctc atc gcc cag gtg ttc ggc ctg Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val Phe Gly Leu 165 170 175	528
gac tcc atc atg ggc aac aag gac ctg tgg ccc ctg ctg ctg agc atc Asp Ser Ile Met Gly Asn Lys Asp Leu Trp Pro Leu Leu Leu Ser Ile 180 185 190	576
atc ttc atc ccg gcc ctg ctg cag tgc atc gtg ctg ccc ttc tgc ccc Ile Phe Ile Pro Ala Leu Leu Gln Cys Ile Val Leu Pro Phe Cys Pro 195 200 205	624
gag agt ccc cgc ttc ctg ctc atc aac cgc aac gag gag aac cgg gcc Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu Asn Arg Ala 210 215 220	672
aag agt gtg cta aag aag ctg cgc ggg aca gct gac gtg acc cat gac Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val Thr His Asp 225 230 235 240	720
ctg cag gag atg aag gaa gag agt cgg cag atg atg cgg gag aag aag Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg Glu Lys Lys 245 250 255	768
gtc acc atc ctg gag ctg ttc cgc tcc ccc gcc tac cgc cag ccc atc Val Thr Ile Leu Glu Leu Phe Arg Ser Pro Ala Tyr Arg Gln Pro Ile 260 265 270	816
ctc atc gct gtg gtg ctg cag ctg tcc cag cag ctg tct ggc atc aac Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn 275 280 285	864
gct gtc ttc tat tac tcc acg agc atc ttc gag aag gcg ggg gtg cag Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln 290 295 300	912
cag cct gtg tat gcc acc att ggc tcc ggt atc gtc aac acg gcc ttc Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn Thr Ala Phe 305 310 315 320	960
act gtc gtg tcg ctg ttt gtg gtg gag cga gca ggc cgg cgg acc ctg Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu 325 330 335	1008
cac ctc ata ggc ctc gct ggc atg gcg ggt tgt gcc ata ctc atg acc His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr 340 345 350	1056
atc gcg cta gca ctg ctg gag cag cta ccc tgg atg tcc tat ctg agc Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser 355 360 365	1104
atc gtg gcc atc ttt ggc ttt gtg gcc ttc ttt gaa gtg ggt cct gcc Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly 370 375 380	1152

ccc atc cca tgg ttc atc gtg gct gaa ctc ttc agc cag ggt cca cgt 1200  
 Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg  
 385 390 395 400  
 cca gct gcc att gcc gtt gca ggc ttc tcc aac tgg acc tca aat ttc 1248  
 Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe  
 405 410 415  
 att gtg ggc atg tgc ttc cag tat gtg gag caa ctg tgt ggt ccc tac 1296  
 Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr  
 420 425 430  
 gtc ttc atc atc ttc act gtg ctc ctg gtt ctg ttc ttc atc ttc acc 1344  
 Val Phe Ile Ile Phe Thr Val Leu Leu Val Leu Phe Phe Ile Phe Thr  
 435 440 445  
 tac ttc aaa gtt cct gag act aaa ggc cgg acc ttc gat gag atc gct 1392  
 Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala  
 450 455 460  
 tcc ggc ttc cgg cag ggg gga gcc agc caa agt gat aag aca ccc gag 1440  
 Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu  
 465 470 475 480  
 gag ctg ttc cat ccc ctg ggg gct gat tcc caa gtg tga 1479  
 Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val  
 485 490

<210> 2  
 <211> 492  
 <212> PRT  
 <213> Homo sapiens

<400> 2

Met Glu Pro Ser Ser Lys Lys Leu Thr Gly Arg Leu Met Leu Ala Val  
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Gly Gly Ala Val Leu Gly Ser Leu Gln Phe Gly Tyr Asn Thr Gly Val  
20 25 30

Ile Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr Asn Gln Thr Trp  
35 40 45

Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr Leu Thr Thr Leu  
50 55 60

Trp Ser Leu Ser Val Ala Ile Phe Ser Val Gly Gly Met Ile Gly Ser  
65 70 75 80

Phe Ser Val Gly Leu Phe Val Asn Arg Phe Gly Arg Arg Asn Ser Met  
85 90 95

Leu Met Met Asn Leu Leu Ala Phe Val Ser Ala Val Leu Met Gly Phe  
100 105 110

Ser Lys Leu Gly Lys Ser Phe Glu Met Leu Ile Leu Gly Arg Phe Ile  
115 120 125

Ile Gly Val Tyr Cys Gly Leu Thr Thr Gly Phe Val Pro Met Tyr Val  
130 135 140

Gly Glu Val Ser Pro Thr Ala Phe Arg Gly Ala Leu Gly Thr Leu His  
145 150 155 160

Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val Phe Gly Leu  
165 170 175

Asp Ser Ile Met Gly Asn Lys Asp Leu Trp Pro Leu Leu Leu Ser Ile  
180 185 190

Ile Phe Ile Pro Ala Leu Leu Gln Cys Ile Val Leu Pro Phe Cys Pro  
195 200 205

Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu Asn Arg Ala  
210 215 220

Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val Thr His Asp  
225 230 235 240

Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg Glu Lys Lys  
245 250 255

Val Thr Ile Leu Glu Leu Phe Arg Ser Pro Ala Tyr Arg Gln Pro Ile  
260 265 270

Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn  
275 280 285

Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln  
290 295 300

Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn Thr Ala Phe  
305 310 315 320

Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu  
325 330 335

His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr  
 340 345 350

Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser  
 355 360 365

Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly  
 370 375 380

Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg  
 385 390 395 400

Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe  
 405 410 415

Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr  
 420 425 430

Val Phe Ile Ile Phe Thr Val Leu Leu Val Leu Phe Phe Ile Phe Thr  
 435 440 445

Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala  
 450 455 460

Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu  
 465 470 475 480

Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val  
 485 490

<210> 3  
 <211> 924  
 <212> DNA  
 <213> Human T-cell lymphotropic virus type 1

<220>  
 <221> CDS  
 <222> (1)..(924)  
 <223>

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 Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro  
 1 5 10 15

ctc atc ctc ggt gat tac agc ccc agc tgc tgt act ctc aca att gga 96  
 Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly  
 20 25 30

gtc tcc tca tac cac tct aaa ccc tgc aat cct gcc cag cca gtt tgt	144
Val Ser Ser Tyr His Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys	
35 40 45	
tcg tgg acc ctc gac ctg ctg gcc ctt tca gcg gat cag gcc cta cag	192
Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln	
50 55 60	
ccc ccc tgc cct aat cta gta agt tac tcc agc tac cat gcc acc tat	240
Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr	
65 70 75 80	
tcc cta tat cta ttc cct cat tgg att aaa aag cca aac cga aat ggc	288
Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly	
85 90 95	
gga ggc tat tat tca gcc tct tat tca gac cct tgt tcc tta aag tgc	336
Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys	
100 105 110	
cca tac ctg ggg tgc caa tca tgg acc tgc ccc tat aca gga gcc gtc	384
Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Ala Val	
115 120 125	
tcc agc ccc tac tgg aag ttt cag caa gat gtc aat ttt act caa gaa	432
Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu	
130 135 140	
gtt tca cgc ctc aat att aat ctc cat ttt tca aaa tgc ggt ttt ccc	480
Val Ser Arg Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro	
145 150 155 160	
ttc tcc ctt cta gtc gac gct cca gga tat gac ccc atc tgg ttc ctt	528
Phe Ser Leu Leu Val Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu	
165 170 175	
aat acc gaa ccc agc caa ctg cct ccc acc gcc cct cct cta ctc ccc	576
Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro	
180 185 190	
cac tct aac cta gac cac atc ctc gag ccc tct ata cca tgg aaa tca	624
His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser	
195 200 205	
aaa ctc ctg acc ctt gtc cag tta acc cta caa agc act aat tat act	672
Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr	
210 215 220	
tgc att gtc tgt atc gat cgt gcc agc cta tcc act tgg cac gtc cta	720
Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu	
225 230 235 240	
tac tct ccc aac gtc tct gtt cca tcc tct tct tct acc ccc ctc ctt	768
Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu	
245 250 255	
tac cca tcg tta gcg ctt cca gcc ccc cac ctg acg tta cca ttt aac	816
Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn	
260 265 270	

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tgg acc cac tgc ttt gac ccc cag att caa gct ata gtc tcc tcc ccc 864  
 Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro  
           275                                  280                                  285

tgt cat aac tcc ctg atc ctg ccc ccc ttt tcc ttg tca cct gtt ccc 912  
 Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro  
           290                                  295                                  300

acc cta gga tcc 924  
 Thr Leu Gly Ser  
 305

<210> 4  
 <211> 308  
 <212> PRT  
 <213> Human T-cell lymphotropic virus type 1

<400> 4

Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro  
 1                                  5                                  10                                  15

Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly  
           20                                  25                                  30

Val Ser Ser Tyr His Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys  
           35                                  40                                  45

Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln  
           50                                  55                                  60

Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr  
           65                                  70                                  75                                  80

Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly  
           85                                  90                                  95

Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys  
           100                                  105                                  110

Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Ala Val  
           115                                  120                                  125

Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu  
           130                                  135                                  140

Val Ser Arg Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro  
           145                                  150                                  155                                  160

Phe Ser Leu Leu Val Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu  
165 170 175

Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro  
180 185 190

His Ser Asn. Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser  
195 200 205

Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr  
210 215 220

Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu  
225 230 235 240

Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu  
245 250 255

Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn  
260 265 270

Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro  
275 280 285

Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro  
290 295 300

Thr Leu Gly Ser  
305

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<210> 5
<211> 912
<212> DNA
<213> Human T-cell lymphotropic virus type 2
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<220>
<221> CDS
<222> (1) .. (912)
<223>
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Met Gly Asn Val Phe Phe Leu Leu Leu Phe Ser Leu Thr His Phe Pro  
1 5 10 15

cca gtc cag cag agc cga tgc aca ctc acg gtt ggt att tcc tcc tac 96  
Pro Val Gln Gln Ser Arg Cys Thr Leu Thr Val Gly Ile Ser Ser Tyr  
20 25 30



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cac tcc agc ccc tgt agc cca acc caa ccc gtc tgc acg tgg aac ctc His Ser Ser Pro Cys Ser Pro Thr Gln Pro Val Cys Thr Trp Asn Leu 35 40 45	144
gac ctt aat tcc cta acg acg gac cag cga cta cat ccc ccc tgc cct Asp Leu Asn Ser Leu Thr Thr Asp Gln Arg Leu His Pro Pro Cys Pro 50 55 60	192
aac cta att act tac tct ggc ttc cac aaa act tat tcc tta tac tta Asn Leu Ile Thr Tyr Ser Gly Phe His Lys Thr Tyr Ser Leu Tyr Leu 65 70 75 80	240
ttc cca cat tgg ata aag aag cca aat aga cag ggc cta gga tac tac Phe Pro His Trp Ile Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr 85 90 95	288
tcg ccc tcc tat aat gac cct tgc tcg cta caa tgc ccc tac tta ggc Ser Pro Ser Tyr Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly 100 105 110	336
tgc caa tca tgg aca tgc cca tac acg ggc ccc gtc tcc agt cca tcc Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Ser 115 120 125	384
tgg aag ttt cac tca gat gta aat ttc acc caa gaa gtc agc caa gtg Trp Lys Phe His Ser Asp Val Asn Phe Thr Gln Glu Val Ser Gln Val 130 135 140	432
tcc ctt cga cta cac ttc tct aag tgc ggc tcc tcc atg acc ctt cta Ser Leu Arg Leu His Phe Ser Lys Cys Gly Ser Ser Met Thr Leu Leu 145 150 155 160	480
gta gat gcc cct gga tat gat cct tta tgg ttc atc acc tca gaa ccc Val Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Thr Ser Glu Pro 165 170 175	528
act cag cct ccc cca act cct ccc cca ctg gtc cat gac tcc gac ctt Thr Gln Pro Pro Pro Thr Pro Pro Pro Leu Val His Asp Ser Asp Leu 180 185 190	576
gaa cac gtc cta acc ccc tcc acg tct tgg aca acc aaa atg ctc aag Glu His Val Leu Thr Pro Ser Thr Ser Trp Thr Thr Lys Met Leu Lys 195 200 205	624
ttt atc cag ctg acc ttg cag agc acc aat tac tcc tgc atg gtt tgc Phe Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys 210 215 220	672
gtg gat aga tcc agc ctc tca tcc tgg cat gtg ctc tac acc ccc aac Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn 225 230 235 240	720
atc tcc att ccc caa caa acc tcc tcc cga acc atc ctc ttt cct tct Ile Ser Ile Pro Gln Gln Thr Ser Ser Arg Thr Ile Leu Phe Pro Ser 245 250 255	768
ctt gcc ctg ccc gct cct cca ttc caa ccc ttc cct tgg acc cat tgc Leu Ala Leu Pro Ala Pro Pro Phe Gln Pro Phe Pro Trp Thr His Cys 260 265 270	816

tac	caa	cct	cgc	cta	cag	gca	ata	acg	aca	gat	gac	tgc	aac	aac	tcc	864
Tyr	Gln	Pro	Arg	Leu	Gln	Ala	Ile	Thr	Thr	Asp	Asp	Cys	Asn	Asn	Ser	
		275					280					285				

att atc ctc ccc cct ttt tcc ctc gcc ccc gta cct cct ccg gcg aca 912  
Ile Ile Leu Pro Pro Phe Ser Leu Ala Pro Val Pro Pro Pro Ala Thr  
290 295 300

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<210> 6
<211> 304
<212> PRT
<213> Human T-cell lymphotropic virus type 2
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<400> 6

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Pro Val Gln Gln Ser Arg Cys Thr Leu Thr Val Gly Ile Ser Ser Tyr  
20 25 30

His Ser Ser Pro Cys Ser Pro Thr Gln Pro Val Cys Thr Trp Asn Leu  
35 40 45

Asp Leu Asn Ser Leu Thr Thr Asp Gln Arg Leu His Pro Pro Cys Pro  
50 55 60

Asn Leu Ile Thr Tyr Ser Gly Phe His Lys Thr Tyr Ser Leu Tyr Leu  
65 70 75 80

Phe Pro His Trp Ile Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr  
85 90 95

Ser Pro Ser Tyr Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly  
100 105 110

Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Ser  
115 120 125

Trp Lys Phe His Ser Asp Val Asn Phe Thr Gln Glu Val Ser Gln Val  
130 135 140

Ser Leu Arg Leu His Phe Ser Lys Cys Gly Ser Ser Met Thr Leu Leu  
145 150 155 160

Val Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Thr Ser Glu Pro  
165 170 175

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Thr Gln Pro Pro Pro Thr Pro Pro Pro Leu Val His Asp Ser Asp Leu  
180 185 190

Glu His Val Leu Thr Pro Ser Thr Ser Trp Thr Thr Lys Met Leu Lys  
195 200 205

Phe Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys  
210 215 220

Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn  
225 230 235 240

Ile Ser Ile Pro Gln Gln Thr Ser Ser Arg Thr Ile Leu Phe Pro Ser  
245 250 255

Leu Ala Leu Pro Ala Pro Pro Phe Gln Pro Phe Pro Trp Thr His Cys  
260 265 270

Tyr Gln Pro Arg Leu Gln Ala Ile Thr Thr Asp Asp Cys Asn Asn Ser  
275 280 285

Ile Ile Leu Pro Pro Phe Ser Leu Ala Pro Val Pro Pro Pro Ala Thr  
290 295 300

&lt;210&gt; 7

&lt;211&gt; 1467

&lt;212&gt; DNA

&lt;213&gt; Simian T-cell lymphotropic virus type 1

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(1467)

&lt;223&gt;

&lt;400&gt; 7

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Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro  
1 5 10 15

ctc att ctc ggt gat tac agc ccc agc tgc tgt act ctc aca att gga 96  
Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly  
20 25 30

gtc tcc tca tac ctc tct aaa ccc tgc aat cct gcc cag cca gtt tgt 144  
Val Ser Ser Tyr Leu Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys  
35 40 45

tca tgg acc ctc gac cta ctg gcc ctt tca gca gac caa gcc cta cag 192  
Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln  
50 55 60

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ccc ccc tgc cct aat cta gta agt tac tcc agc tac cat gcc acc tat	240
Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr	
65 70 75 80	
tcc cta tat cta ttc cct cat tgg att aaa aag cca aac cga aat ggc	288
Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly	
85 90 95	
gga ggc tat tat tcg gcc tct tat tca gac cca tgt tct tta aag tgc	336
Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys	
100 105 110	
cca tac tta ggg tgc caa tca tgg acc tgc ccc tat aca gga gtc gtc	384
Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Val Val	
115 120 125	
tcc agc ccc tat tgg aaa ttt cag caa gat gtc aat ttt act caa gaa	432
Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu	
130 135 140	
gtt tca cac ctc aat att aat ctc cat ttc tca aaa tgc ggt ttt ccc	480
Val Ser His Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro	
145 150 155 160	
ttc tcc ctt cta atc gac gct cca gga tat gac ccc atc tgg ttc ctt	528
Phe Ser Leu Leu Ile Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu	
165 170 175	
aat acc gaa ccc agc caa ctg cct ccc acc gcc cct cct cta ctc ccc	576
Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro	
180 185 190	
cac tct aac ctg gac cac atc ctc gag ccc tct ata cca tgg aaa tca	624
His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser	
195 200 205	
aaa ctt ctg act ctt gtc cag cta acc cta caa agc act aat tac act	672
Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr	
210 215 220	
tgc atc gtc tgt ata gac cgt gcc agc ctc tct act tgg cat gtc ctg	720
Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu	
225 230 235 240	
tac tct ccc aac gtc tct gtt ccg tcc tct tct tct acc ccc ctc ctt	768
Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu	
245 250 255	
tac ccg tcg tta gcg ctt ccagcct ccc cac ctg acg cta cca ttt aac	816
Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn	
260 265 270	
tgg acc cac tgc ttt gac ccc cag att caa gct ata gtc tcc tcc ccc	864
Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro	
275 280 285	
tgt cat aac tcc ctc atc ctg ccc ccc ttt tcc ttg tca cct gtt ccc	912
Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro	
290 295 300	

acc cta gga tcc cgc tcc cgc cga gcg gta ccg gtg gcg gtc tgg ctt 960  
 Thr Leu Gly Ser Arg Ser Arg Arg Ala Val Pro Val Ala Val Trp Leu  
 305 310 315 320  
 gtc tcc gcc ctg gcc atg gga gcc gga att gct ggc ggg att acc ggc 1008  
 Val Ser Ala Leu Ala Met Gly Ala Gly Ile Ala Gly Gly Ile Thr Gly  
 325 330 335  
 tcc atg tcc ctc gcc tca gga aag agc ctc cta cat gag gtg gac aaa 1056  
 Ser Met Ser Leu Ala Ser Gly Lys Ser Leu Leu His Glu Val Asp Lys  
 340 345 350  
 gat att tcc caa tta act caa gca ata gtc aaa aac cac aaa aat cta 1104  
 Asp Ile Ser Gln Leu Thr Gln Ala Ile Val Lys Asn His Lys Asn Leu  
 355 360 365  
 ctc aaa att gca cag tat gct gcc cag aac agg cga ggc ctt gat ctc 1152  
 Leu Lys Ile Ala Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu  
 370 375 380  
 ctg ttc tgg gag caa gga gga tta tgc aaa gca tta caa gaa cag tgc 1200  
 Leu Phe Trp Glu Gln Gly Gly Leu Cys Lys Ala Leu Gln Glu Gln Cys  
 385 390 395 400  
 tgt ttt cta aat att acc aat tcc cat gtc tca ata cta caa gaa aga 1248  
 Cys Phe Leu Asn Ile Thr Asn Ser His Val Ser Ile Leu Gln Glu Arg  
 405 410 415  
 ccc ccc ctt gag aat cga gtc ctc act ggc tgg ggc ctt aac tgg gac 1296  
 Pro Pro Leu Glu Asn Arg Val Leu Thr Gly Trp Gly Leu Asn Trp Asp  
 420 425 430  
 ctt ggc ctc tca cag tgg gct cga gag gcc tta caa act ggg atc acc 1344  
 Leu Gly Leu Ser Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr  
 435 440 445  
 ctt gtt gca cta ctc ctt ctc gtt atc ctt gca gga cca tgc atc ctc 1392  
 Leu Val Ala Leu Leu Leu Leu Val Ile Leu Ala Gly Pro Cys Ile Leu  
 450 455 460  
 cgt cag ctg cga cac ctc ccc tcg cgc gtc aga tac ccc cat tat tct 1440  
 Arg Gln Leu Arg His Leu Pro Ser Arg Val Arg Tyr Pro His Tyr Ser  
 465 470 475 480  
 ctt ata aac cct gag tca tcc ctg taa 1467  
 Leu Ile Asn Pro Glu Ser Ser Leu  
 485

<210> 8  
 <211> 488  
 <212> PRT  
 <213> Simian T-cell lymphotropic virus type 1

<400> 8

Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro  
 1 5 10 15

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Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly  
 20 25 30

Val Ser Ser Tyr Leu Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys  
 35 40 45

Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln  
 50 55 60

Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr  
 65 70 75 80

Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly  
 85 90 95

Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys  
 100 105 110

Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Val Val  
 115 120 125

Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu  
 130 135 140

Val Ser His Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro  
 145 150 155 160

Phe Ser Leu Leu Ile Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu  
 165 170 175

Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro  
 180 185 190

His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser  
 195 200 205

Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr  
 210 215 220

Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu  
 225 230 235 240

Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Thr Pro Leu Leu  
 245 250 255

Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn  
 260 265 270

Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro  
 275 280 285

Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro  
 290 295 300

Thr Leu Gly Ser Arg Ser Arg Arg Ala Val Pro Val Ala Val Trp Leu  
 305 310 315 320

Val Ser Ala Leu Ala Met Gly Ala Gly Ile Ala Gly Gly Ile Thr Gly  
 325 330 335

Ser Met Ser Leu Ala Ser Gly Lys Ser Leu Leu His Glu Val Asp Lys  
 340 345 350

Asp Ile Ser Gln Leu Thr Gln Ala Ile Val Lys Asn His Lys Asn Leu  
 355 360 365

Leu Lys Ile Ala Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu  
 370 375 380

Leu Phe Trp Glu Gln Gly Gly Leu Cys Lys Ala Leu Gln Glu Gln Cys  
 385 390 395 400

Cys Phe Leu Asn Ile Thr Asn Ser His Val Ser Ile Leu Gln Glu Arg  
 405 410 415

Pro Pro Leu Glu Asn Arg Val Leu Thr Gly Trp Gly Leu Asn Trp Asp  
 420 425 430

Leu Gly Leu Ser Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr  
 435 440 445

Leu Val Ala Leu Leu Leu Val Ile Leu Ala Gly Pro Cys Ile Leu  
 450 455 460

Arg Gln Leu Arg His Leu Pro Ser Arg Val Arg Tyr Pro His Tyr Ser  
 465 470 475 480

Leu Ile Asn Pro Glu Ser Ser Leu  
 485

<210> 9  
 <211> 1461  
 <212> DNA  
 <213> Simian T-cell lymphotropic virus type 2

<220>  
 <221> CDS  
 <222> (1)..(1461)  
 <223>

<400> 9  
 atg ggt aag ata att gct ttc ctt tta ttc cat ctt aca tgt atc aca 48  
 Met Gly Lys Ile Ile Ala Phe Leu Leu Phe His Leu Thr Cys Ile Thr  
 1 5 10 15  
 atc act aaa cag agc cgg tgc acg ctt acg gta ggt gtc tcc tcg tat 96  
 Ile Thr Lys Gln Ser Arg Cys Thr Leu Thr Val Gly Val Ser Ser Tyr  
 20 25 30  
 cac tct agt ccc tgc agt ctt gcc caa cct atc tgc acc tgg gat ctc 144  
 His Ser Ser Pro Cys Ser Leu Ala Gln Pro Ile Cys Thr Trp Asp Leu  
 35 40 45  
 gac ctt cat tcc tta act aca gac caa cgt ctg tac cct cca tgc ccc 192  
 Asp Leu His Ser Leu Thr Thr Asp Gln Arg Leu Tyr Pro Pro Cys Pro  
 50 55 60  
 aat cta gtt tct tac tct aac ttc cac aag tcc tac tcc tta tat ttg 240  
 Asn Leu Val Ser Tyr Ser Asn Phe His Lys Ser Tyr Ser Leu Tyr Leu  
 65 70 75 80  
 ttc ccg cac tgg gta aaa aag cca aat aga caa ggc ctg gga tac tat 288  
 Phe Pro His Trp Val Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr  
 85 90 95  
 tct gca tcc tac agc gac ccc tgc tcg ctc cag tgc cct tat tta gga 336  
 Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly  
 100 105 110  
 agc cag tct tgg aca tgc cct tac acc ggc ccc atc tcc agc ccg tct 384  
 Ser Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Ile Ser Ser Pro Ser  
 115 120 125  
 tgg agg ttc cac cga gat gtt aac ttc acc caa gag gtc aac cat gta 432  
 Trp Arg Phe His Arg Asp Val Asn Phe Thr Gln Glu Val Asn His Val  
 130 135 140  
 acc ctc cgg cta cac ttc tcc cga tgt ggc tct tct atg acc ctc ctc 480  
 Thr Leu Arg Leu His Phe Ser Arg Cys Gly Ser Ser Met Thr Leu Leu  
 145 150 155 160  
 ata gac gcc cca ggc tac gac ccc ctg tgg ttc atc tct tcg gaa ccc 528  
 Ile Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Ser Ser Glu Pro  
 165 170 175  
 act cag ccc ccc ccc act tcc cca cca tta gtc cgc gac tct gac ctt 576  
 Thr Gln Pro Pro Pro Thr Ser Pro Pro Leu Val Arg Asp Ser Asp Leu  
 180 185 190



gaa cat atc tta acc ccc tcc tcc tcc tgg gct act agg atg cta acc Glu His Ile Leu Thr Pro Ser Ser Ser Trp Ala Thr Arg Met Leu Thr 195 200 205	624
ctc atc caa cta act cta caa agt acc aat tat tct tgc atg gtt tgt Leu Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys 210 215 220	672
ata gac aga acc agc ttg tcg tcc tgg cac gta ctc tat acc cct aat Ile Asp Arg Thr Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn 225 230 235 240	720
atc tct gcc tca cct ggg ggc gac tcc ttg cct ata ctt tat ccc tcc Ile Ser Ala Ser Pro Gly Gly Asp Ser Leu Pro Ile Leu Tyr Pro Ser 245 250 255	768
ttg gcc cta ccg gcc ccc caa ccc cag ccg ttt tcc tgg tct cac tgt Leu Ala Leu Pro Ala Pro Gln Pro Gln Pro Phe Ser Trp Ser His Cys 260 265 270	816
tac cag ccc cac cta cag gca gta act aca gcc aat tgc aac aat tcc Tyr Gln Pro His Leu Gln Ala Val Thr Thr Ala Asn Cys Asn Asn Ser 275 280 285	864
att gtc ctg ccc cca ttc tct ctc acc ccg gtg cct tcc cct ggg aca Ile Val Leu Pro Pro Phe Ser Leu Thr Pro Val Pro Ser Pro Gly Thr 290 295 300	912
aga agc cgc cgg gct att cca gtg gct gta tgg ctc gtc tca gcc cta Arg Ser Arg Arg Ala Ile Pro Val Ala Val Trp Leu Val Ser Ala Leu 305 310 315 320	960
gcg gcc ggg act ggt att gca ggg gga ata acc gga tcc ctg tcc cta Ala Ala Gly Thr Gly Ile Ala Gly Gly Ile Thr Gly Ser Leu Ser Leu 325 330 335	1008
gca tca agc cgc agc ctg ctt ttt gaa gtt gac aaa gat att tcc cac Ala Ser Ser Arg Ser Leu Leu Phe Glu Val Asp Lys Asp Ile Ser His 340 345 350	1056
ctc aca caa gcc atc gtt aaa aac cat caa aac atc ctc cgc gta gca Leu Thr Gln Ala Ile Val Lys Asn His Gln Asn Ile Leu Arg Val Ala 355 360 365	1104
caa tat gca gcc caa aat aga aga gga cta gac ctc ctg ttt tgg gaa Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu Leu Phe Trp Glu 370 375 380	1152
caa gga ggc ctc tgc aaa gcc ata caa gag caa tgt tgc ttc ctt aac Gln Gly Gly Leu Cys Lys Ala Ile Gln Glu Gln Cys Cys Phe Leu Asn 385 390 395 400	1200
atc agc aac acc cat gtg tcc gtc ctt cag gag cgc ccc ccc ctg gaa Ile Ser Asn Thr His Val Ser Val Leu Gln Glu Arg Pro Pro Leu Glu 405 410 415	1248
aag aga gtc atc aca gga tgg ggt ctc aac tgg gac cta ggg cta tcc Lys Arg Val Ile Thr Gly Trp Gly Leu Asn Trp Asp Leu Gly Leu Ser 420 425 430	1296

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caa tgg gca cgg gaa gca ctc caa act ggt ata acc atc cta gcc ttg 1344  
 Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr Ile Leu Ala Leu  
 435 440 445

ctc ctc ctt gtc ata ctg ttc ggt cct tgt atc ctt cgc caa ctc caa 1392  
 Leu Leu Leu Val Ile Leu Phe Gly Pro Cys Ile Leu Arg Gln Leu Gln  
 450 455 460

tca ctt ccc cac cgg cta cag aac agg cac aac caa tac tct ctt att 1440  
 Ser Leu Pro His Arg Leu Gln Asn Arg His Asn Gln Tyr Ser Leu Ile  
 465 470 475 480

aac cag gaa acc aca cta taa 1461  
 Asn Gln Glu Thr Thr Leu  
 485

&lt;210&gt; 10

&lt;211&gt; 486

&lt;212&gt; PRT

&lt;213&gt; Simian T-cell lymphotropic virus type 2

&lt;400&gt; 10

Met Gly Lys Ile Ile Ala Phe Leu Leu Phe His Leu Thr Cys Ile Thr  
 1 5 10 15

Ile Thr Lys Gln Ser Arg Cys Thr Leu Thr Val Gly Val Ser Ser Tyr  
 20 25 30

His Ser Ser Pro Cys Ser Leu Ala Gln Pro Ile Cys Thr Trp Asp Leu  
 35 40 45

Asp Leu His Ser Leu Thr Thr Asp Gln Arg Leu Tyr Pro Pro Cys Pro  
 50 55 60

Asn Leu Val Ser Tyr Ser Asn Phe His Lys Ser Tyr Ser Leu Tyr Leu  
 65 70 75 80

Phe Pro His Trp Val Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr  
 85 90 95

Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly  
 100 105 110

Ser Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Ile Ser Ser Pro Ser  
 115 120 125

Trp Arg Phe His Arg Asp Val Asn Phe Thr Gln Glu Val Asn His Val  
 130 135 140

Thr Leu Arg Leu His Phe Ser Arg Cys Gly Ser Ser Met Thr Leu Leu  
 145 150 155 160

Ile Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Ser Ser Glu Pro  
 165 170 175

Thr Gln Pro Pro Pro Thr Ser Pro Pro Leu Val Arg Asp Ser Asp Leu  
 180 185 190

Glu His Ile Leu Thr Pro Ser Ser Ser Trp Ala Thr Arg Met Leu Thr  
 195 200 205

Leu Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys  
 210 215 220

Ile Asp Arg Thr Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn  
 225 230 235 240

Ile Ser Ala Ser Pro Gly Gly Asp Ser Leu Pro Ile Leu Tyr Pro Ser  
 245 250 255

Leu Ala Leu Pro Ala Pro Gln Pro Gln Pro Phe Ser Trp Ser His Cys  
 260 265 270

Tyr Gln Pro His Leu Gln Ala Val Thr Thr Ala Asn Cys Asn Asn Ser  
 275 280 285

Ile Val Leu Pro Pro Phe Ser Leu Thr Pro Val Pro Ser Pro Gly Thr  
 290 295 300

Arg Ser Arg Arg Ala Ile Pro Val Ala Val Trp Leu Val Ser Ala Leu  
 305 310 315 320

Ala Ala Gly Thr Gly Ile Ala Gly Gly Ile Thr Gly Ser Leu Ser Leu  
 325 330 335

Ala Ser Ser Arg Ser Leu Leu Phe Glu Val Asp Lys Asp Ile Ser His  
 340 345 350

Leu Thr Gln Ala Ile Val Lys Asn His Gln Asn Ile Leu Arg Val Ala  
 355 360 365

Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu Leu Phe Trp Glu  
 370 375 380

Gln Gly Gly Leu Cys Lys Ala Ile Gln Glu Gln Cys Cys Phe Leu Asn  
385 390 395 400

Ile Ser Asn Thr His Val Ser Val Leu Gln Glu Arg Pro Pro Leu Glu  
405 410 415

Lys Arg Val Ile Thr Gly Trp Gly Leu Asn Trp Asp Leu Gly Leu Ser  
420 425 430

Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr Ile Leu Ala Leu  
435 440 445

Leu Leu Leu Val Ile Leu Phe Gly Pro Cys Ile Leu Arg Gln Leu Gln  
450 455 460

Ser Leu Pro His Arg Leu Gln Asn Arg His Asn Gln Tyr Ser Leu Ile  
465 470 475 480

Asn Gln Glu Thr Thr Leu  
485

<210> 11  
<211> 930  
<212> DNA  
<213> Simian T-cell lymphotropic virus type 3

<220>  
<221> CDS  
<222> (1)..(930)  
<223>

<400> 11  
atg ggt aag ttt ggc ctt tat tgt ctt gtt cac ctt tac ata ctt ctc 48  
Met Gly Lys Phe Gly Leu Tyr Cys Leu Val His Leu Tyr Ile Leu Leu  
1 5 10 15  
cct gcc tcc tct ggc aat ccc agt cgg tgc acc ctg ttc ata ggg gcc 96  
Pro Ala Ser Ser Gly Asn Pro Ser Arg Cys Thr Leu Phe Ile Gly Ala  
20 25 30  
tct tcc tac cac tcc agc cct tgc ggg tcc agc ctc cca cgg tgt acc 144  
Ser Ser Tyr His Ser Ser Pro Cys Gly Ser Ser Leu Pro Arg Cys Thr  
35 40 45  
tgg aat ctt gac cta ttc tcc ctc acg aaa gat caa agc cta agc ccc 192  
Trp Asn Leu Asp Leu Phe Ser Leu Thr Lys Asp Gln Ser Leu Ser Pro  
50 55 60  
cca tgt cca gac tta att act tac tca caa tac cac aag ccc tac tcc 240  
Pro Cys Pro Asp Leu Ile Thr Tyr Ser Gln Tyr His Lys Pro Tyr Ser  
65 70 75 80

ctg tat gta ttc cct cat tgg ata act aaa cct aac cgc cgg ggc tta Leu Tyr Val Phe Pro His Trp Ile Thr Lys Pro Asn Arg Arg Gly Leu 85 90 95	288
ggt tac tat tcc gct tcc tac tca gac ccc tgt gcc ata cag tgc cct Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ala Ile Gln Cys Pro 100 105 110	336
tac ctg gga tgc cag tcg tgg aca tgc ccc tat acg ggc ccg gtg tcc Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser 115 120 125	384
agt ccg cat tgg aga tac acc tat gat ctt aac ttt acc cag gag gta Ser Pro His Trp Arg Tyr Thr Tyr Asp Leu Asn Phe Thr Gln Glu Val 130 135 140	432
tca tcc gtc tcc tta cac ttg cat ttc tcc aaa tgc gga tcc tcg ttc Ser Ser Val Ser Leu His Leu His Phe Ser Lys Cys Gly Ser Ser Phe 145 150 155 160	480
tcc ttt cta cta gac gca cca gga tat gac cca gtg tgg ttc ctc tcc Ser Phe Leu Leu Asp Ala Pro Gly Tyr Asp Pro Val Trp Phe Leu Ser 165 170 175	528
tcc cag gcc aca cag gct cca ccc aca cct gcc cct ctc ata cgg gac Ser Gln Ala Thr Gln Ala Pro Pro Thr Pro Ala Pro Leu Ile Arg Asp 180 185 190	576
tca gat ctc cag tac att cta gaa ccg ccc att ccg tgg agc tct aag Ser Asp Leu Gln Tyr Ile Leu Glu Pro Pro Ile Pro Trp Ser Ser Lys 195 200 205	624
att ctt aac ctt atc ctc ctc acc cta aaa agc act aac tat tct tgc Ile Leu Asn Leu Ile Leu Thr Leu Lys Ser Thr Asn Tyr Ser Cys 210 215 220	672
atg gtc tgt gtt gac cgc tcc agc cta tcc tca tgg cat gtc ctg tat Met Val Cys Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr 225 230 235 240	720
gga ccc act caa gtc ccc agt cca ccc gac ccc caa gcc cgg tct atc Gly Pro Thr Gln Val Pro Ser Pro Pro Asp Pro Gln Ala Arg Ser Ile 245 250 255	768
ctg cga cct gcc tta gct att ccc gcc agt aat atc acc ccc ccg ttt Leu Arg Pro Ala Leu Ala Ile Pro Ala Ser Asn Ile Thr Pro Pro Phe 260 265 270	816
cct tgg acc cat tgc tat cgc cct cct ccg caa gcc atc tcc tcg gag Pro Trp Thr His Cys Tyr Arg Pro Pro Pro Gln Ala Ile Ser Ser Glu 275 280 285	864
aat tgt aac aac tct gta gtg ctg ccc ccc ttt tct ctg tct cca att Asn Cys Asn Asn Ser Val Val Leu Pro Pro Phe Ser Leu Ser Pro Ile 290 295 300	912
cct aac gtc tcc aga ccc Pro Asn Val Ser Arg Pro 305 310	930

<210> 12  
<211> 310  
<212> PRT  
<213> Simian T-cell lymphotropic virus type 3

<400> 12

Met Gly Lys Phe Gly Leu Tyr Cys Leu Val His Leu Tyr Ile Leu Leu  
1 5 10 15

Pro Ala Ser Ser Gly Asn Pro Ser Arg Cys Thr Leu Phe Ile Gly Ala  
20 25 30

Ser Ser Tyr His Ser Ser Pro Cys Gly Ser Ser Leu Pro Arg Cys Thr  
35 40 45

Trp Asn Leu Asp Leu Phe Ser Leu Thr Lys Asp Gln Ser Leu Ser Pro  
50 55 60

Pro Cys Pro Asp Leu Ile Thr Tyr Ser Gln Tyr His Lys Pro Tyr Ser  
65 70 75 80

Leu Tyr Val Phe Pro His Trp Ile Thr Lys Pro Asn Arg Arg Gly Leu  
85 90 95

Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ala Ile Gln Cys Pro  
100 105 110

Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser  
115 120 125

Ser Pro His Trp Arg Tyr Thr Tyr Asp Leu Asn Phe Thr Gln Glu Val  
130 135 140

Ser Ser Val Ser Leu His Leu His Phe Ser Lys Cys Gly Ser Ser Phe  
145 150 155 160

Ser Phe Leu Leu Asp Ala Pro Gly Tyr Asp Pro Val Trp Phe Leu Ser  
165 170 175

Ser Gln Ala Thr Gln Ala Pro Pro Thr Pro Ala Pro Leu Ile Arg Asp  
180 185 190

Ser Asp Leu Gln Tyr Ile Leu Glu Pro Pro Ile Pro Trp Ser Ser Lys  
195 200 205

Ile Leu Asn Leu Ile Leu Leu Thr Leu Lys Ser Thr Asn Tyr Ser Cys  
210 215 220

Met Val Cys Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr  
 225 230 235 240

Gly Pro Thr Gln Val Pro Ser Pro Pro Asp Pro Gln Ala Arg Ser Ile  
 245 250 255

Leu Arg Pro Ala Leu Ala Ile Pro Ala Ser Asn Ile Thr Pro Pro Phe  
 260 265 270

Pro Trp Thr His Cys Tyr Arg Pro Pro Pro Gln Ala Ile Ser Ser Glu  
 275 280 285

Asn Cys Asn Asn Ser Val Val Leu Pro Pro Phe Ser Leu Ser Pro Ile  
 290 295 300

Pro Asn Val Ser Arg Pro  
 305 310

<210> 13  
 <211> 153  
 <212> DNA  
 <213> Human T-cell lymphotropic virus type 1

<220>  
 <221> CDS  
 <222> (1)..(153)  
 <223>

<400> 13  
 att aaa aag cca aac cca aat ggc gga ggc tat tat tta gcc tct tat 48  
 ile lys lys pro asn pro asn gly gly gly tyr tyr leu ala ser tyr  
 1 5 10 15  
 tca gac cct tgt tcc tta aaa tgc cca tac ctg ggc tgc caa tca tgg 96  
 ser asp pro cys ser leu lys cys pro tyr leu gly cys gln ser trp  
 20 25 30  
 acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144  
 thr cys pro tyr thr gly ala val ser ser pro tyr trp lys phe gln  
 35 40 45  
 caa gat gtc 153  
 gln asp val  
 50

<210> 14  
 <211> 51  
 <212> PRT  
 <213> Human T-cell lymphotropic virus type 1

<400> 14

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Ile Lys Lys Pro Asn Pro Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr  
 1 5 10 15

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp  
 20 25 30

Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln  
 35 40 45

Gln Asp Val  
 50

<210> 15  
 <211> 153  
 <212> DNA  
 <213> Human T-cell lymphotropic virus type 1

<220>  
 <221> CDS  
 <222> (1)..(153)  
 <223>

<400> 15  
 gtt aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48  
 Val Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr  
 1 5 10 15

tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96  
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp  
 20 25 30

acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144  
 Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln  
 35 40 45

caa gat gtc 153  
 Gln Asp Val  
 50

<210> 16  
 <211> 51  
 <212> PRT  
 <213> Human T-cell lymphotropic virus type 1

<400> 16

Val Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr  
 1 5 10 15

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp  
 20 25 30

Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln  
 35 40 45



Gln Asp Val  
50

<210> 17  
<211> 153  
<212> DNA  
<213> Human T-cell lymphotropic virus type 1

<220>  
<221> CDS  
<222> (1)..(153)  
<223>

<400> 17  
att aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48  
Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr  
1 5 10 15  
tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96  
Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp  
20 25 30  
acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt caa 144  
Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln  
35 40 45  
caa gat gtc 153  
Gln Asp Val  
50

<210> 18  
<211> 51  
<212> PRT  
<213> Human T-cell lymphotropic virus type 1

<400> 18  
Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr  
1 5 10 15  
Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp  
20 25 30  
Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln  
35 40 45

Gln Asp Val  
50

<210> 19  
<211> 153  
<212> DNA  
<213> Human T-cell lymphotropic virus type 1

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(153)

&lt;223&gt;

&lt;400&gt; 19

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Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr

1

5

10

15

tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp

20

25

30

acc tgc ccc tat aca gga ccc gtc tcc agc ccc tac tgg aag ttt cag 144

Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Tyr Trp Lys Phe Gln

35

40

45

caa gat gtc 153

Gln Asp Val

50

&lt;210&gt; 20

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Human T-cell lymphotropic virus type 1

&lt;400&gt; 20

Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr

1

5

10

15

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp

20

25

30

Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Tyr Trp Lys Phe Gln

35

40

45

Gln Asp Val

50

&lt;210&gt; 21

&lt;211&gt; 171

&lt;212&gt; DNA

&lt;213&gt; Human T-cell lymphotropic virus type 1

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(171)

&lt;223&gt;

&lt;400&gt; 21

att aaa aag cca aac cga aat ggc gga ggc tat cat tca gcc tct tat 48

Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr His Ser Ala Ser Tyr

1

5

10

15

tca gac cct tgt tcc tta aag tgc cca tac ctg ggg tgc caa tca tgg 96  
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp  
                   20                  25                  30

acc tgc ccc tat gca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144  
 Thr Cys Pro Tyr Ala Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln  
                   35                  40                  45

caa gat gtc aat ttt acc cag gaa gta 171  
 Gln Asp Val Asn Phe Thr Gln Glu Val  
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<210> 22

<211> 57

<212> PRT

<213> Human T-cell lymphotropic virus type 1

<400> 22

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Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp  
                   20                  25                  30

Thr Cys Pro Tyr Ala Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln  
                   35                  40                  45

Gln Asp Val Asn Phe Thr Gln Glu Val  
           50                  55

<210> 23

<211> 153

<212> DNA

<213> Human T-cell lymphotropic virus type 2

<220>

<221> CDS

<222> (1)..(153)

<223>

<400> 23

ata aga aag cca aac aga cag ggc cta ggg tac tac tcg cct tcc tac 48  
 Ile Arg Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr Ser Pro Ser Tyr  
                   5                  10                  15

aat gac cct tgc tcg cta caa tgc ccc tac ttg ggc tcc caa tca tgg 96  
 Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly Ser Gln Ser Trp  
                   20                  25                  30

aca tgc cca tac acg gcc ccc gtc tcc act cca tcc tgg aat ttt cat 144  
 Thr Cys Pro Tyr Thr Ala Pro Val Ser Thr Pro Ser Trp Asn Phe His  
                   35                  40                  45

tca gat gta  
Ser Asp Val  
50

153

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<211> 51  
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<213> Human T-cell lymphotropic virus type 2

&lt;400&gt; 24

Ile Arg Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr Ser Pro Ser Tyr  
1 5 10 15

Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly Ser Gln Ser Trp  
20 25 30

Thr Cys Pro Tyr Thr Ala Pro Val Ser Thr Pro Ser Trp Asn Phe His  
35 40 45

Ser Asp Val  
50

<210> 25  
<211> 11  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 25

Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr  
1 5 10

<210> 26  
<211> 22  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 26

Asn Gln Thr Trp Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr  
1 5 10 15

Leu Thr Thr Leu Trp Ser  
20

<210> 27  
<211> 10  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 27

Lys Ser Phe Glu Met Leu Ile Leu Gly Arg  
1 5 10

<210> 28  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 28

Asp Ser Ile Met Gly Asn Lys Asp Leu  
1 5

<210> 29  
<211> 14  
<212> PRT  
<213> Homo sapiens

<400> 29

Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln Gln Pro  
1 5 10

<210> 30  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 30

Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser  
1 5 10

<210> 31  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 31

Gln Tyr Val Glu Gln Leu Cys  
1 5